Swift GRB Product File Naming Convention

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1 Light Curves and Light Curve Plots

The Swift GRB fits and gif light curve products archived for each Swift GRB will have the following general form:

`GRBNAME_[`*I*`][`*MM*`][`*BB*`][`*OO*`][`*T*`][b?].lc`

`GRBNAME` is the name of the GRB (e.g. GRB051221A). *I* is the instrument as follows:

Character Code	Meaning
x	XRT Only
b	BAT Only
u	UVOT Only
m	Mixed Instruments

MM is the mode as follows:

Character Code	Meaning
pc	XRT PC mode
wt	XRT WT mode
pw	XRT WT/PC mode
xb	XRT and BAT
ps	BAT Pre-slew Epoch
is	BAT In-slew Epoch
as	BAT After-slew Epoch
ba	BAT All Epochs
uv	UVOT (all modes)

BB is the spectral band represented as follows:

Character Code	Meaning
e1	15-350 keV
e2	15-25,25-50,50-100,100-350 keV
e3	15-150 keV
e4	0.3-10.0 keV
e5	0.3-2.0 keV
e6	2.0-10.0 keV
e7	Optical

OO indicates what the light curve represents: `'sr'` for source or `'bg'` for background.

T is the type of light curve as follows:

Character Code	Meaning
c	Calibrated Rate
n	Net Rate (uncalibrated)
f	Flux
a	Combination of n,c,f (see next ¶)
r	Hardness Ratio

The 'a' character code corresponds to single light curve files with a 'RATE' extension containing three light curves. The RATE, ERROR, and UPLIMIT columns are for the Net light curve. The RATECOR, ERRORCOR, and UPLIMITCOR columns are for the Calibrated light curve. And The RATEFLUX, ERRORFLUX, and UPLIMITFLUX columns are for the Flux light curve. The TIME, XAX_E, TIMEDEL, and FRACEXP colums are valid for all curves in the file.

If a light curve is binned using something other than time bins (e.g. minimum counts or bayesian blocks), the last character before '.lc' will be 'b'.

The gifs of various light curves will be named in an identical manner, except that '.lc' will be replaced with '_lc.gif'. Note that not all light curves will have a corresponding plot (in fact, most will not).

2 Spectra and Spectral Plots

In addition to light curves, there will be spectra and related plots produced. These will be named in a similar manner:

GRBNAME_[*I*][*MM*][*BB*][*OO*].pha

GRBNAME, *I*, *MM*, *BB* and *OO* are identical to §1. GIF plots will have '_ph.gif' in place of '.pha'.

3 Image Plots

Lastly, there will be plots of image and event data for all instruments, named similarly:

GRBNAME_[*I*][*MM*][*BB*][*OO*][*TT*].gif

GRBNAME, *I*, *MM*, *BB* and *OO* are identical to §1. *TT* is the type of image:

Character Code	Meaning
i1	Image Mosaic
i2	Single Image
i3	Double Image (diagonal)

4 Information Fits file

In addition to the data products above, there will also be an information table for each GRB. This table will have one extension for each instrument - `'XRTINFO'`, `'BATINFO'`, and `'UVOTINFO'`. This table will be named:

`GRBNAME_inf.fits`

5 Typical GRB Product Set

The following files will be typically available for a single GRB (here we use GRB051221A as an example):

XRT Only Products	
Filename	**Description**
GRB051221A_xpce4sra.lc	XRT PC 0.3-10keV source light curves
GRB051221A_xpce4srab.lc	XRT PC 0.3-10keV source binned light curves
GRB051221A_xpce4bgn.lc	XRT PC 0.3-10keV background net light curve
GRB051221A_xwte4sra.lc	XRT WT 0.3-10keV source light curves
GRB051221A_xwte4srab.lc	XRT WT 0.3-10keV source binned light curves
GRB051221A_xwte4bgn.lc	XRT WT 0.3-10keV background net light curve
GRB051221A_xpce5sra.lc	XRT PC 0.3-2keV source light curves
GRB051221A_xpce5srab.lc	XRT PC 0.3-2keV source binned light curves
GRB051221A_xpce5bgn.lc	XRT PC 0.3-2keV background net light curve
GRB051221A_xwte5sra.lc	XRT WT 0.3-2keV source light curves
GRB051221A_xwte5srab.lc	XRT WT 0.3-2keV source binned light curves
GRB051221A_xwte5bgn.lc	XRT WT 0.3-2keV background net light curve
GRB051221A_xpce6sra.lc	XRT PC 2-10keV source light curves
GRB051221A_xpce6srab.lc	XRT PC 2-10keV source binned light curves
GRB051221A_xpce6bgn.lc	XRT PC 2-10keV background net light curve
GRB051221A_xwte6sra.lc	XRT WT 2-10keV source light curves
GRB051221A_xwte6srab.lc	XRT WT 2-10keV source binned light curves
GRB051221A_xwte6bgn.lc	XRT WT 2-10keV background net light curve
GRB051221A_xpce4srrb.lc	XRT PC 0.3-10keV source hardness ratio
GRB051221A_xwte4srrb.lc	XRT WT 0.3-10keV source hardness ratio
GRB051221A_xpwe4srcb_lc.gif	XRT PC/WT 0.3-10keV source cal. binned light curve gif
GRB051221A_xpwe4srfb_lc.gif	XRT PC/WT 0.3-10keV source flux binned light curve gif
GRB051221A_xpwe4srrb_lc.gif	XRT PC/WT 0.3-10keV source hardness ratio binned gif
GRB051221A_xpce4sri1.gif	XRT PC 0.3-10keV image mosaic
GRB051221A_xpce4sri3.gif	XRT PC 0.3-10keV double diagonal image
GRB051221A_xwte4sri1.gif	XRT WT 0.3-10keV image mosaic
GRB051221A_xwte4sri3.gif	XRT WT 0.3-10keV double diagonal image

BAT Only Products	
Filename	**Description**
GRB051221A_bbae1srn.lc	BAT 15-350keV source net light curve
GRB051221A_bbae2srn.lc	BAT 4-channel source net light curve
GRB051221A_bbae4srfb.lc	BAT 0.3-10keV source flux binned light curve
GRB051221A_bbae6srfb.lc	BAT 2-10keV source flux binned light curve
GRB051221A_bbae1srn_lc.gif	BAT 15-350keV source net light curve gif
GRB051221A_bbae2srn_lc.gif	BAT 4-channel source net light curve gif
GRB051221A_bpse3sr_ph.gif	BAT 15-150keV Pre-slew source spectrum gif
GRB051221A_bise3sr_ph.gif	BAT 15-150keV In-slew source spectrum gif
GRB051221A_base3sr_ph.gif	BAT 15-150keV After-slew source spectrum gif
GRB051221A_bpse3sri2.gif	BAT 15-350keV Pre-slew source single image gif
GRB051221A_base3sri2.gif	BAT 15-350keV After-slew source single image gif

UVOT Products	
Filename	**Description**
GRB051221A_uuve7sri3.gif	UVOT optical source single image gif
GRB051221A_uuve7srf_lc.gif	UVOT optical source flux light curve gif

XRT and BAT Combined Products	
Filename	**Description**
GRB051221A_mxbe4srfb_lc.gif	XRT + BAT 0.3-10keV source flux binned light curve gif
GRB051221A_mxbe6srfb_lc.gif	XRT + BAT 2.0-10keV source flux binned light curve gif

GRB Product Info	
Filename	**Description**
GRB051221A_inf.fits	GRB Product Info